REMARKS

Claim Status

Claims 1-4, 7, 14-16, 19 and 28 are now pending, with claims 1, 16 and 28 being the only independent claims. No new matter has been added. Reconsideration of the application is respectfully requested.

Overview of the Office Action

Claims 1-4, 7, 15 and 16 stand rejected under 35 U.S.C. §102(e) as anticipated by U.S. Patent No. 6,892,317 ("*Sampath*"). Claim 19 stands rejected under 35 U.S.C. §103(a) as unpatentable over *Sampath* in view of U.S. Patent No. 6,424,860 ("*Karlsson*"). Lastly, claims 14 and 28 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Sampath* in view of U.S. Patent No. 5,812,656 ("*Garland*").

Applicants have carefully considered the Examiner's rejections, and the comments provided in support thereof. For the following reasons, applicants assert that all claims now pending in the present application are patentable over the cited art.

Descriptive Summary of the Prior Art

Sampath discloses a method and systems for interconnecting a plurality of electronic systems. According to *Sampath*, these electronic systems are connected to a diagnostic server which receives data from the one or more electronic systems (see col. 1, lines 36-40).

Karlsson discloses "cardiac monitoring systems which provide an analysis and display of one or more parameters relating to the condition of ischemic patients" (see col. 1, lines 17-20).

Garland discloses "a prioritized connection over the public switched telecommunications network that does not prevent outgoing or incoming service to the connected parties" (see col. 1, line 66 thru col. 2, line 3).

Patentability of Independent Claims 1 and 28 under 35 U.S.C. 102(e)

The Examiner (at pg. 2-3 of the Office Action) asserts that:

> Sampath taught a method of diagnosing an equipment to be inspected, wherein ***a communications module*** reads operating data relating to the equipment to be inspected and forwards the operating data to a remote server, and the remote server performs a diagnosis based on the forwarded operating data, the method comprising:
>
> determining, at ***an intermediate server***, which one from among ***a plurality of specialized assistance servers*** each specially configured to perform diagnosis on a different equipment of a predefined collection of equipment is the one server that is appropriate for diagnosing the equipment to be inspected, said ***intermediate server*** placing the communications module into communication with the determined one of the plural specialized assistance servers that is specifically configured for diagnosing the equipment to be inspected (Col. 5, lines 35~60, Col. 6, Lines 58-65, diagnostic (claimed intermediate server) receives status information of a monitored electronic system(s), determines an action to be made based on the info. and initiates the routing circuit to route the request to the appropriate service, repair, and/or parts/consumable supplier, or to a repair agent).... (Emphasis Supplied)

Applicants disagree.

The claimed invention is directed to a system, communications module and method for diagnosing equipment (2) to be inspected, where a communications module associated with the equipment (2) to be inspected reads operating data relating to the equipment (2) to be inspected and forwards the data to a remote server (3, 5a, ... 5n). In accordance with the invention, the remote server (3, 5a, ... 5n) is implemented by the combination of an intermediate server (3) and a plurality of specialized assistance servers (5a, ... 5n), each of which specialized assistance

servers (5a, ... 5n) is specially configured to perform diagnosis on a *different* one of a predefined collection of equipment. Thus, where the predetermined collection of equipment is formed of a plurality of devices variously attached, for example, to a local area network, each of the specialized assistance servers (5a, ... 5n) is specially configured to diagnose a different one of the plural network devices. The operating data relating to the particular equipment to be inspected is forwarded by the communications module (1) to the intermediate server (3), which then determines which one of the specialized servers, from among the plurality of such specialized servers (5a, ... 5n), is configured or appropriate for performing diagnosis on the equipment whose operating data has been supplied or forwarded by the communications module (1). The intermediate server (3) then places the communications module (1) into communication with the determined one of the plural specialized assistance servers which is configured to diagnose that equipment. Thus, the role of the intermediate server (3) is to select one particular specialized server from the plural specialized assistance servers (5a, ... 5n) for performing the diagnosis on the equipment (2), according to the collection of equipment to which the equipment (2) belongs.

The communications module (1) next transmits the operating data concerning the equipment (2) to the determined one of the specialized assistance servers, which performs the diagnosis. As noted above, the determined specialized assistance server is specially configured to perform diagnosis on a particular one of a predefined collection of equipment that includes the particular equipment (2) whose operating data has been received. The device in the predefined group may for example comprise the vehicles of a given motor manufacturer or the sensors of a plurality of private local networks.

Sampath, on the other hand, teaches a different method for diagnosing electrical equipment. *Sampath* (col. 3, line 63 thru col. 4, line 2) describes that "[t]he diagnostic system 10 comprises a diagnostic server 100, one or more monitored electronic systems 200, one or more third party service providers 300, one or more value added service providers 400, one or more parts/consumables suppliers 500, and one or more original equipment manufacture (OEM) service providers 600 and one or more secondary knowledge servers 700".

Sampath (col. 4, lines 55-57) explains that "[i]n operation, the one or more monitored electronic systems 200 generate status information, e.g., control data, process data, and diagnostic data, during the course of operation". *Sampath* (col. 4, lines 55-57) additionally explains that "[h]aving determined the status information for the particular electronic system, the status information circuit 250, in cooperation with the I/O interface 230, forwards the status information to the diagnostic server 100 via link 50 and the network 25". *Sampath* thus teaches that the electronic system generates status information and transmits the status information to a single diagnostic server 100 via the network 25.

Sampath (col. 5 line 51 thru col. 6, line 7) then explains that upon receipt of the status information, the single diagnostic server 100 performs a diagnostic analysis based on the status information that is received from the status information circuit 250 of the monitored electronic system 200. An additional or secondary knowledge source 700 is accessed by the server 100 to acquire additional information and/or expertise with respect to the particular monitored electronic system. (Col. 6, lines 13-10). *Sampath* (col. 6, lines 58-60) further explains that "[o]nce the analysis of the electronic system is performed, the repair planning circuit 165 determines an appropriate action in response to the received status information. Having determined an appropriate action, the routing circuit 160, in cooperation with the controller 120

and the I/O interface 130, routes the action request to the appropriate service, repair, and/or parts/consumable supplier, or to an autonomous repair agent". *Sampath* thus expressly teaches that after diagnosis of the problem with the electronic system 200 by the single diagnostic server 100, the repair planning circuit 165 of the diagnostic server 100 determines (based on that diagnosis) an appropriate action to be taken in response to the received status information and its diagnosis, and that based on the determined appropriate action the diagnostic server 100 then routes an action request to the appropriate entity (e.g., service, repair, parts/consumable suppliers autonomous repair agent) to perform the needed action.

Sampath thus clearly teaches, in contrast to applicants' claimed invention, a system and method in which the diagnosis of a range of equipment is performed centrally by a single diagnostic server 100. Only after server 100 has completed the diagnosis and, based thereon, does the diagnostic server 100 determine an action to be performed and select the appropriate entity to perform the particular determined action from among a group of different service entities that are respectively adapted to perform various different responsive actions. The role of the single diagnostic server 100 of the system of *Sampath* is to thus perform a centralized diagnosis of all of the equipment based on status information provided by any of the multiple electronic systems that may need to be inspected, to determine an appropriate action based on the results of that diagnosis, and to route an action request to a separate appropriate entity that is specialized to perform the required action.

The *Sampath* system is fundamentally different than the method and system recited in applicants' independent claims 1 and 16, respectively. *Sampath* teaches a system in which a single central server 100, which the Examiner views as the alleged equivalent of applicants' intermediate server, performs a centralized diagnosis for all equipment under its auspices.

Sampath thus teaches that the diagnostics for all of the various electronic systems 200 are performed by the same central server 100. In contrast, the intermediate server (3) recited in applicants' independent claims 1 and 16 determines which one from among a plurality of specialized assistance servers (each specially configured to perform diagnosis on a different equipment of a predefined collection of equipment) is the one server that is appropriate for diagnosing the particular equipment to be inspected. It then instructs the communications module to forward the equipment status information to that specialized assistance server which, in turn, performs the diagnosis. Thus, all diagnostic operations are performed by one of a plurality of specialized assistance servers — not the central or intermediate server of applicants' method and system — for the particular one (2) of a predefined collection of equipment whose operating data has been received.

There is no equivalent intermediate server in *Sampath* that is configured to route a service request to a selected one of a plurality of diagnostic servers based on which of those diagnostic servers has been specially configured to diagnose data related to the particular device, as recited in applicants' amended independent claims 1 and 16. *Sampath* thus fails to teach or suggest an intermediate server having the role of centralizing diagnostic requests sent by devices to be controlled and routing each request to the one specialized server that is configured to process the particular request by performing a diagnosis.

In addition, the system of *Sampath* fails to teach or suggest the provision or use of a plurality of specialized assistance servers, each of which is specially configured to perform diagnosis on a respective *different* one of a predefined collection of equipment. Instead, *Sampath* teaches a single centralized server for performing diagnostics, and a plurality of specialized repair services for responding to the results of the central diagnostics. There are no

plural servers in *Sampath* that are individually specially configured for a particular device; instead, the central server 100 routes an action request to the appropriate entity (e.g., service, repair, parts/consumable suppliers autonomous repair agent) that can perform the needed action. Thus, the repair services are not differentiated by device but, instead, by task or ability or function. There is no disclosure or suggestion in *Sampath* of servers that are specialized for diagnostics ability with a specific device within a predefined group of devices.

The claimed invention allows a user to diagnose a wide range of different and notably dissimilar equipment, such as various devices (e.g. a telephone, TV, sensors, etc.) of a local home network. By initially contacting a unique, centralized server (i.e., the intermediate server), the user is able to obtain specialized diagnosis of any or all many possibly dissimilar devices by a specialized server configured to diagnose that very device. The intermediate server provides a central point of contact in the event of problems with any of the multiple devices disposed on the local home network; the intermediate server handles the selection of a suitable assistance server that is specially configured to diagnose a particular device, and places the device and the server in communication with each other to enable the diagnosis to proceed. *Sampath* fails to teach or suggest the features recited in independent claims 1 and 16 which achieve this advantageous functionality.

In view of the foregoing, independent claims 1 and 16 are not anticipated by *Sampath.* Reconsideration and withdrawal of the rejection of claims 1 and 16 under 35 U.S.C. §102 are accordingly deemed to be in order, and early notice to that effect is solicited.

Moreover, by virtue of the above-discussed differences between the recitations of claims 1 and 16 and the teachings of *Sampath*, and the lack of any clear motivation for modifying

Sampath to achieve applicants' claimed invention (and the advantages thereof), independent claims 1 and 16 are likewise deemed to be patentable over *Sampath* under 35 U.S.C. §103.

Patentability of Independent Claim 28 under 35 U.S.C. 103(a)

The Examiner (at pg. 9 of the Office Action) has acknowledged that *Sampath* fails to teach or suggest "means for detecting an emergency event relating to the equipment to be inspected and then, on detecting such an emergency event, for making a priority connection with a 'black box' server and transmitting thereto a stream of data relating to the equipment to be inspected," as recited in independent claim 28, and cites *Garland* to provide these features.

Applicants disagree, however, that the combination of *Sampath* and *Garland* achieves the communication module of independent claim 28. There is no communication module in *Sampath* that is configured to forward the operating data to a remote server which is configured to perform diagnosis on different equipment of a predefined collection of equipment based on the forwarded operating data as recited in applicants' amended independent claim 28.

The *Sampath* system discloses that an I/O interface is located at each of the service providers, as well at the secondary knowledge servers. Each interface permits each of the various entities to communicate with the diagnostic server 100 shown in FIG. 1 of *Sampath.* However, there is no teaching or suggestion that any of these I/O interfaces is configured to forward the operating data to a remote server which is configured to perform diagnosis on different equipment of a predefined collection of equipment based on the forwarded operating data. Indeed, *Sampath* expressly teaches that the routing circuit 160 of the diagnostic server 100, in cooperation with the controller 120 and the I/O interface 130, routes the action request to the

appropriate service, repair, and/or parts/consumable supplier, or to an autonomous repair agent (see col. 6, lines 60-65).

Similarly, there is nothing in *Garland* with respect to a communication module that is configured to forward the operating data to a remote server which is configured to perform diagnosis on different equipment of a predefined collection of equipment based on the forwarded operating data, as recited in applicants' independent claim 28. *Garland* teaches systems that are used to prioritize connections. *Garland* is totally silent with respect to the recited communication module in applicants' independent claim 28 that forwards operating data to a remote server which is configured to perform diagnosis on different equipment of a predefined collection of equipment based on the forwarded operating data. The combination of *Sampath* and *Garland* therefore fails to teach or suggest the features recited in independent claim 28, and independent claim 28 is accordingly deemed to be patentable over the combination of *Sampath* and *Garland.*

Reconsideration and withdrawal of the rejection of claim 28 under 35 U.S.C. §103 are accordingly deemed to be in order, and early notice to that effect is solicited.

Patentability of dependent claim 19 under 35 U.S.C. §103(a)

The Examiner (at pg. 6 of the Office Action) has acknowledged that *Sampath* fails to teach or suggest how an intermediate server and monitor are configured when the equipment to be inspected is an emergency vehicle, as recited in claim 19. *Karlsson* has been cited to provide these features.

Applicants disagree, however, that the combination of *Sampath* and *Karlsson* achieves the system of dependent claim 19. There is nothing in *Karlsson* to cure the above-noted

deficiencies of *Sampath* concerning the lack of teachings of an intermediate server or the plurality of specifically configured specialized assistance servers as claimed.

Karlsson teaches a method and system for providing cardiac data to a central monitoring unit 10 that is a used to analyze the cardiac data. *Karlsson* is totally silent with respect to the recited system in applicants' independent claim 16 that utilizes an intermediate server and the claimed plurality of specialized assistance servers. The combination of *Sampath* and *Karlsson* therefore fails to teach or suggest the features recited in independent claim 16, let alone in dependent claim 19. Dependent claim 19 is accordingly also deemed to be patentable over the combination of *Sampath* and *Karlsson*.

Dependent Claims

In view of the patentability of independent claims 1, 16 and 28, and for at least the reasons presented above, each of dependent claims 2-4, 7, 14, 15 and 19 is believed to be patentable therewith over the prior art. Each of dependent claims 2-4, 7, 14, 15 and 19 additionally includes features that serve to still further distinguish the claimed invention over the applied art.

Conclusion

Based on all of the above, applicants submit that the present application is now in full and proper condition for allowance. Prompt and favorable action to this effect, and early passage of the application to issue, are solicited.

Should the Examiner have any comments, questions, suggestions or objections, the Examiner is respectfully requested to telephone the undersigned to facilitate an early resolution of any outstanding issues.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,
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